SN 10/648,548
Art Unit 1645

Amendments to the Claims (including presentation of New Claims):

This listing of claims will replace all prior versions of claims in the application.

Listing of the Claims:

Claims 1.-18. Canceled.

19. (New) A method for the diagnosis of Alzheimer's disease in a patient comprising the steps of:

(1) providing a sample of an appropriate body fluid from said patient;

(2) detecting the presence in the sample of elevated levels of a butyrylcholinesterase (BChe) having an altered glycosylation pattern such that it has a relatively lesser affinity for concanavalin A (ConA) and a relatively greater affinity for Lens Culinaris (LCA) than a BChe with an unaltered glycosylation pattern;

(3) correlating the presence of elevated levels of the BChe with a glycosylation pattern such that it has a relatively lesser affinity for ConA and a relatively greater affinity for Lens Culinaris (LCA) than a BChe with an unaltered glycosylation pattern with Alzheimer's disease in the patient.

20. (New) A method according to claim 19, wherein step (2) comprises the steps of:

(i) determining the total BChe in the sample;

(ii) subjecting the sample to lectin binding analysis to determine the amount of BChe unbound to ConA;

(iii) calculating the amount (%) of BChe unbound to ConA;

(iv) correlating the presence of elevated levels of the BChe with an altered glycosylation pattern with the calculated amount of unbound BChe, wherein a level of unbound

BChe of greater than 5% is indicative of the presence of elevated levels of the BChe with an altered glycosylation pattern.

21. (New) A method according to claim 20, wherein in step (iv) the % of unbound BChe is greater than 6.4%.

22. (New) A method according to claim 20, wherein in step (iv) the level of unbound BChe is greater than 7.5%.

23. (New) A method according to claim 20, wherein in step (iv) the level of unbound BChe is greater than 8%.

24. (New) A method according to claim 20, wherein said step (i) of determining the total amount of BChe in the sample is determined by a method selected from enzymatic activity analysis and monoclonal antibody binding.

25. (New) A method according to claim 20, wherein said step (ii) of determining the amount of BChe unbound to ConA is determined by a method selected from enzymatic activity analysis and monoclonal antibody binding.

26. (New) A method according to claim 19, wherein said body fluid is cerebrospinal fluid, blood or blood plasma.

27. (New) A method according to claim 26, wherein said body fluid is blood, said method including the step of preparing blood plasma from the blood for analysis.

28. (New) A method according to claim 19, further comprising the steps of:

(a) determining the total acetylcholinesterase in the sample;

(b) subjecting the sample to lectin binding analysis to determine the amount of acetylcholinesterase unbound to ConA and determining the percentage of acetylcholinesterase unbound to ConA;

(c) subjecting the sample to lectin binding analysis to determine the amount of acetylcholinesterase unbound to wheat germ agglutinin (WGA) and calculating the percentage of acetylcholinesterase unbound to WGA;

(d) determining the ratio of acetylcholinesterase unbound to ConA to acetylcholinesterase unbound to WGA wherein a ratio above about 0.95 is characteristic of Alzheimer's Disease.

29. (New) A method according to claim 28, wherein butyrylcholinesterase is removed from the sample prior to analysis of acetylcholinesterase.